

WHAT IS CLAIMED IS:

1. An ink jet recording apparatus comprising:
 - a recording head for recording data on a recording medium by discharging ink from a plurality of discharge ports;
 - a carriage having the recording head mounted thereon for reciprocally scanning the surface of said recording medium;
 - recording medium carrying means for carrying said recording medium by a predetermined distance in the direction perpendicular to said scanning direction of the carriage each time the carriage reciprocally scans the surface of said recording medium;
 - an ink storage tank placed in a position where reciprocal scanning by said carriage and carrying of said recording medium by said recording medium carrying means are not affected by the ink storage tank;
 - a supply tube for supplying ink from the ink storage tank to said recording head; and
 - said control means for controlling ink discharge states of said recording head in accordance with an image signal input from a host computer; wherein
 - said control means controls the scanning speed of said carriage in accordance with the temperature of the ink supplied from said ink tank to said ink

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supply tube.

2. An ink jet recording apparatus comprising:
a recording head for recording data on a
5 recording medium by discharging ink from a plurality
of discharge ports;

a carriage having the recording head mounted
thereon for reciprocally scanning the surface of said
recording medium;

10 recording medium carrying means for carrying
said recording medium by a predetermined distance in
the direction perpendicular to the scanning direction
of said carriage each time the carriage reciprocally
scans the surface of said recording medium;

15 an ink storage tank placed in a position where
reciprocal scanning by said carriage and carrying of
said recording medium by said recording medium
carrying means are not affected by the ink storage
tank;

20 a supply tube for supplying ink from the ink
storage tank to said recording head; and

said control means for controlling ink discharge
states of said recording head in accordance with an
image signal input from a host computer; wherein

25 the control means controls a non-recording time
during which no ink is discharged from said recording
head in accordance with the temperature of the ink

supplied from said ink tank to said ink supply tube.

3. An ink jet recording apparatus comprising:

a recording head for recording data on a

5 recording medium by discharging ink from a plurality of discharge ports;

a carriage having the recording head mounted thereon for reciprocally scanning the surface of said recording medium;

10 recording medium carrying means for carrying said recording medium by a predetermined distance in the direction perpendicular to said scanning direction of said carriage each time the carriage reciprocally scans the surface of said recording
15 medium;

an ink storage tank placed in a position where reciprocal scanning by said carriage and carrying of said recording medium by said recording medium carrying means are not affected by the ink storage
20 tank;

a supply tube for supplying ink from the ink storage tank to said recording head; and

said control means for controlling ink discharge states of said recording head in accordance with an
25 image signal input from a host computer; wherein

said control means controls the repetitive recording scanning frequency of the carriage in

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accordance with the temperature of the ink supplied from said ink tank to said ink supply tube.

4. The ink jet recording apparatus according to claim 1, wherein a pressure smoothing tank capable of storing a predetermined capacity of ink in order to suppress a negative pressure rise in said supply tube is set between said supply tube and said recording head.

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5. The ink jet recording apparatus according to claim 4, wherein the predetermined capacity of said pressure smoothing tank is 1 cc or more.

6. The ink jet recording apparatus according to claim 1, wherein said ink tank comprises a temperature sensor.

7. The ink jet recording apparatus according to claim 1, further comprising recovery system means for recovering the ink discharge state of said recording head to a preferable state by forcibly discharging ink from each discharge port of said recording head.

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8. The ink jet recording apparatus according to claim 1, wherein said recording head comprises an

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electrothermal converting element for converting electric energy into thermal energy to discharge ink by using the film boiling generated in ink by the thermal energy applied by the electrothermal element.

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9. A recording control method for an ink jet recording apparatus comprising a recording head for recording data on a recording medium by discharging ink from a plurality of discharge ports, a carriage having the recording head mounted thereon for reciprocally scanning the surface of said recording medium, recording medium carrying means for carrying said recording medium by a predetermined distance in the direction perpendicular to the scanning direction of said carriage each time said carriage reciprocally scans the surface of said recording medium, an ink storage tank placed in a position where reciprocal scanning by said carriage and carrying of said recording medium by said recording medium carrying means are not affected by the ink storage tank, and a supply tube for supplying ink from the ink storage tank to the recording head, and control means for controlling ink discharge states of said recording head in accordance with an image signal input from a host computer, comprising:

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a step of lowering the scanning speed of said carriage when the temperature of the ink supplied

from said ink tank to said ink supply tube is lower than a reference temperature.

10. A recording control method for an ink jet
5 recording apparatus comprising a recording head for recording data on a recording medium by discharging ink from a plurality of discharge ports, a carriage having the recording head mounted thereon for reciprocally scanning the surface of said recording
10 medium, recording medium carrying means for carrying said recording medium by a predetermined distance in the direction perpendicular to the scanning direction of said carriage each time said carriage reciprocally scans the surface of said recording medium, an ink
15 storage tank placed in a position where reciprocal scanning by said carriage and carrying of said recording medium by said recording medium carrying means are not affected by the ink storage tank, and a supply tube for supplying ink from the ink storage
20 tank to said recording head, and control means for controlling ink discharge states of said recording head in accordance with an image signal input from a host computer, comprising:

a step of increasing a non-recording time during
25 which no ink is discharged from said recording head when the temperature of the ink supplied from said ink tank to said ink supply tube is lower than a

reference temperature.

11. A recording control method for an ink jet
recording apparatus comprising a recording head for
5 recording data on a recording medium by discharging
ink from a plurality of discharge ports, a carriage
having the recording head mounted thereon for
reciprocally scanning the surface of said recording
medium, recording medium carrying means for carrying
10 said recording medium by a predetermined distance in
the direction perpendicular to the scanning direction
of said carriage each time said carriage reciprocally
scans the surface of said recording medium, an ink
storage tank placed in a position where reciprocal
15 scanning by said carriage and carrying of said
recording medium by said recording medium carrying
means are not affected by the ink storage tank, and a
supply tube for supplying ink from the ink storage
tank to said recording head, and control means for
20 controlling ink discharge states of said recording
head in accordance with an image signal input from a
host computer, comprising:

a step of increasing the repetitive recording
scanning frequency by said carriage when the
25 temperature of the ink supplied from said ink tank to
said ink supply tube is lower than a reference
temperature.